DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 1.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-012384
Date Inspected: 03-Mar-2010

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: American Bridge/Fluor Enterprises, a JV

OSM Arrival Time: 1300
OSM Departure Time: 2130
Location: Job Site

CWI Name: Michael Johnson

Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**CWI Present:**	☑ Yes	☐ No	
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☐ Yes	☑ No	☐ N/A
				Approved WPS:	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: Orthotropic Box Girders

Summary of Items Observed:

At the start of the shift the Quality Assurance Inspector (QAI) traveled to the project site and observed the following work performed by American Bridge/Fluor (AB/F) personnel at the E1/E2 field splice:

A). Field Splice E1 to E2.

The QAI observed the AB/F personnel setting the Direct Current Electrode Positive (DCEP) welding parameters for the Submerged Arc Welding (SAW) process to be utilized during the production welding of the deck plate field splice identified as 1E-2E, Segments A1 through A5. At the start of the set-up AB/F experienced an electrical issue which was resolved by AB/F Assistant Welding Supervisor Daniel Ieraci by replacing the start and stop sensor. At the conclusion of the resolving this issue the AB/F personnel continued with setting the of the welding parameters utilizing a test plate specimen. The welding was performed by welding operators Rory Hogan ID-3186 and Jeremy Dolman ID-5042 utilizing the Welding Procedure Specification (WPS) ABF-WPS-D15-4042B-1 and the parameter readings were verified by Quality Control (QC) Inspector Michael Johnson and were noted as follows: 560 amps, 32.6 volts and the travel speed was measured as 381mm for the first submerged arc machine and 562 amps, 32.6 volts with a travel speed mearsured at 381mm for the second submerged arc machine. The heat input was calculated at 2.8 kj/mm. At this time Mr. Ieraci suspended the work at approximately 1650 and instructed the welding crew to perform clean up and to complete the alignment of the tracks for the submerged arc machines. Mr. Ieraci informed the QAI that the welding of the field splice will commence on the next scheduled shift on Thursday morning, March 04, 2010.

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QA Observation and Verification Summary

The QA inspector observed the welding of the test specimen utilizing the WPS noted above. The welding parameters and preheat temperatures were verified and noted utilizing a Fluke 337 clamp meter for the electrical welding parameters and a Fluke 63 IR Thermometer for verifying the preheat and interpass temperatures. The consumables utilized during the welding appeared to be an ESAB manufactured product identified as ESAB Spoolarc 81with an electrode size of 3.2mm which appeared to comply with the AWS Electrode Specification AWS A5.17 and the AWS Classification F7A4-Em12K-H8. The welding and QC inspection performed on this shift was not completed and appeared to be in general compliance with the contract documents. The QAI randomly verified the QC inspection, the welding parameters and surface temperatures utilizing various inspection equipment and gages, a Fluke 337 Clamp Meter and Tempilstik Temperature indicators.

See digital photographs below in regards to the work observed during this shift.

Summary of Conversations:

There were no pertinent conversations discussed in regards to the project except as noted above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mohammad Fatemi (916) 813-3677, who represents the Office of Structural Materials for your project.

Inspected By:	Reyes,Danny	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer